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Effectiveness of Family Planning Practice Among High-Risk Postnatal Patients at Buntong Health Clinic

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ABSTRACT

Background: High-risk postnatal patients require effective family planning to prevent unintended pregnancies and associated complications. This study evaluates the quality and effectiveness of family planning services at Buntong Health Clinic.

Methods: A retrospective audit was conducted from January 1, 2025, to February 14, 2025, involving 56 high-risk postnatal patients. Data on contraceptive methods and follow-up adherence were collected from January 1, 2024, to December 31, 2024. Universal sampling was applied, including patients with prior obstetric complications, medical conditions, or high-risk reproductive history.

Results: Structural indicators achieved 100% compliance, reflecting strong infrastructure support. Process indicators showed high compliance, with 98% of patients receiving counselling and adopting the Code 1 contraceptive method. However, 16.1% defaulted on follow-ups, indicating a need for improved patient engagement. Outcome indicators demonstrated a 100% success rate in preventing unintended pregnancies among patients adhering to follow-up schedules.

Conclusion: The family planning services at Buntong Health Clinic are highly effective, with excellent compliance and outcomes. Further improvements should focus on reducing follow-up defaulters, enhancing patient education, and implementing digital health records to streamline care.

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KEYWORDS:

family planning service, Health

INTRODUCTION

All pregnancies carry risks. A pregnancy is considered high-risk if it highly affects the health risks of the pregnant mother, the fetus, or both. High-risk pregnancies can be due to several factors, such as advanced maternal age, pre-existing medical conditions, multiple pregnancies, past pregnancy complications, or lifestyle choices.[1] Women with these conditions may need to go through a greater extent of challenges for the sake of their babies. These pregnancies are usually associated with an increased risk of preterm birth, low birth weight, gestational diabetes and hypertension, and other events. Thus, the main priority is to avoid high-risk pregnancies as much as possible to ensure the safety of both the mother and child.

Nevertheless, high-risk pregnancies can be prevented with effective family planning strategies. The National Family Planning Programme was introduced in 1966, initially to reduce the population growth rate which during that time, high population growth may delay the country's economic growth.[2] Family planning determines the appropriate time to have children, the duration gap between each pregnancy, and the desired number of children within a marriage.[3]

Various types of modern contraceptive methods are available such as oral contraceptive pills, condoms, spermicides, intrauterine devices (IUD), and surgeries including vasectomy and tubal ligation. All in all, family planning guarantees better physical, mental, and emotional well-being for parents and a stable family environment.[4]

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Contraceptive methods are classified based on their Pearl index, which measures effectiveness. Code 1 methods, with a Pearl index of ≤9, are categorized as effective contraception and included options like sterilization, intrauterine devices (IUDs), Implanon, and oral contraceptive pills (OCP). Code 2 methods, with a Pearl index of 10-32, are considered less effective and included methods such as male condoms and cervical caps. Code 3 methods, with a Pearl index of ≥25, are also classified as less effective contraception, and examples included the calendar-rhythm method, lactation amenorrhea method, and withdrawal method.[5]

High-risk postnatal patients are individuals who experienced complications during pregnancy or childbirth, which may pose health hazards to both the mother and the newborn. To avoid complications, these people must be continuously monitored and get specialized care during the postpartum period. According to the World Health Organization (WHO), postpartum family planning (PPFP) is crucial, especially amongst the high-risk postnatal patients for reducing closely spaced and unplanned deliveries within the first year after delivery, when both mothers and newborns are most vulnerable.[6]

It is evident that the usage of contraception is very useful in family planning to prevent unplanned pregnancy, especially amongst the high-risk postnatal patients. Furthermore, when contraceptive counselling is provided during both prenatal and postpartum time periods, the usage of contraception will become more effective.[7] Hence, this audit was carried out to evaluate the data of structures, processes, and outcome of family planning practice among high-risk postnatal patients in Buntong Health Clinic.

OBJECTIVES

General Objectives

To review and improve the quality of family planning service among high-risk postnatal patients in Buntong Health Clinic, Perak hence assessing this clinic's level of performance.

Specific Objectives

1. To review the quality of family planning services among high-risk postnatal patients in Buntong Health Clinic.
2. To evaluate the effectiveness of the code 1 contraceptive method.
3. To improve the quality of family planning service among high-risk postnatal patients in Buntong Health Clinic.

METHODOLOGY

This was a retrospective audit involving an evaluation on effective family planning practice among high-risk postnatal patients at Buntong Health Clinic, conducted from 1st January 2025 until 14th February 2025. Patients' information on the contraceptive methods used and compliance to follow-up were retrieved from the registry and patients' family planning cards from 1st January 2024 until 31st December 2024. Universal sampling method was used in this audit, whereby all high-risk postnatal patients who were under follow up in the clinic were included.

The total sample size was 56 patients altogether. Inclusion criteria were postnatal patients identified from past obstetric history to be high risk including past obstetric history of antepartum hemorrhage, postpartum hemorrhage, lower segment Caesarian section, gestational diabetes mellitus, hypertension disorder in pregnancy and others. Other inclusion criteria were parity 5 and above, frequent pregnancy with a time gap of <2 years in between pregnancies, currently having medical problem like ischemic heart disease, hypertensive with end organ failure, blood disorders, diabetes with end organ failure, cancer and others, having sexually transmitted disease as well as currently having underlying psychiatric problems and on treatment. Exclusion criteria were high-risk patients with no significant past obstetric history, past medical history, past surgical history or psychiatric history, as well as those who completely defaulted for follow-up.

Consent was obtained from the Medical Research Ethics Committee (MREC) through the National Medical Research Register (NMRR) to conduct this audit (NMRR: RSCH ID-24-07491-ANN). Permission was obtained from Buntong Health Clinic, and the Family Medicine Specialist in charge was ~~given~~ notified through an official letter from Universiti Kuala Lumpur Royal College of Medicine Perak (UniKL RCMP) prior to conducting this audit. All patients' personal information collected data were kept secure and confidential and can only be accessed by the investigators. The data collected was handled in accordance with the legislation and regulations. Data were entered and analyzed using Microsoft Excel.

RESULTS

Figure 1: Distribution by ethnicity

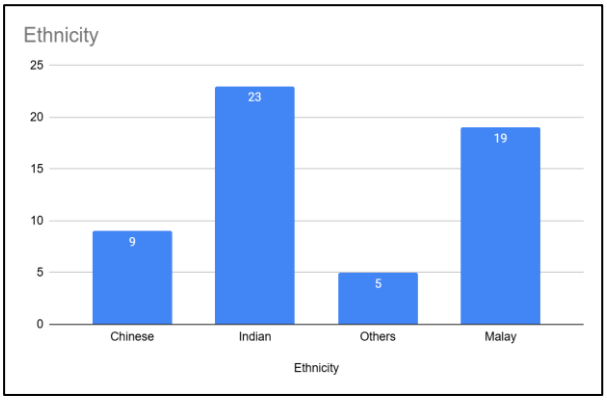

Figure 2: Distribution by age

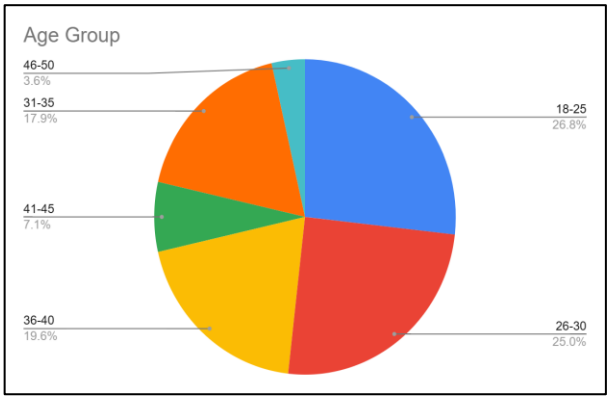

Figure 1 showed the different races of 56 high-risk postnatal patients who were under follow up in Buntong Health Clinic. Majority of the patients are Indians, 23 (41.1%), followed by the Malays, 18 (33.9%), Chinese, 9 (16.1%) and others, 5 (8.9%). Figure 2 showed the different age groups of these patients. Majority of them were within 18-30 years old group, 29 (51.8%), followed by the 31-40 years old, 11 (37.5%) and lastly 41-50 years old group with only 6 (10.7%).

Figure 3: Structure Indicators

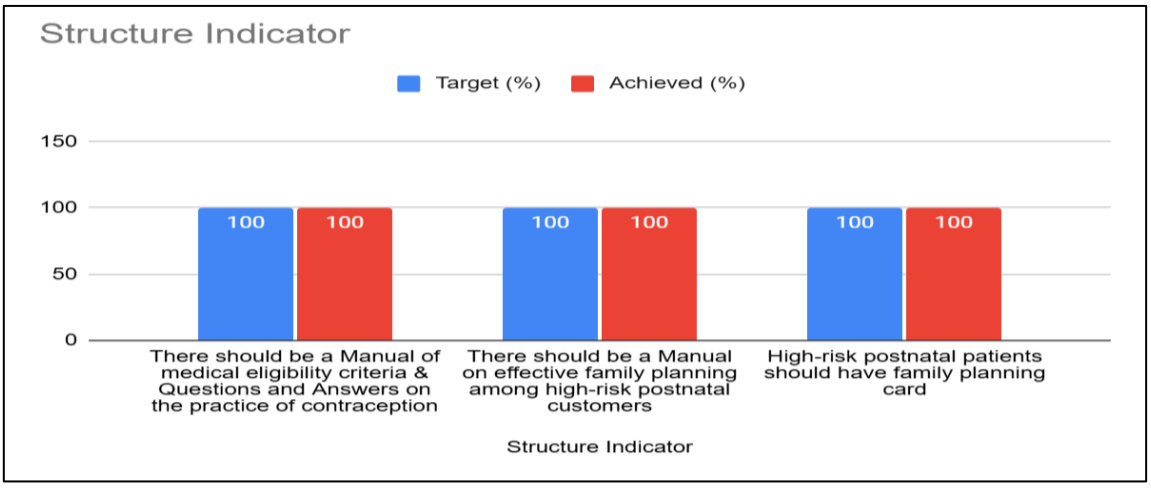

Figure 3 showed all indicators of care for structure such as availability of manual of medical eligibility criteria and questions and answers on the practice of contraception[8], manual on effective family planning among high-risk postnatal patients[8], as well as having proper family planning cards registered for all postnatal patients[9], achieved the target set which was 100%.

Figure 4: Process Indicators

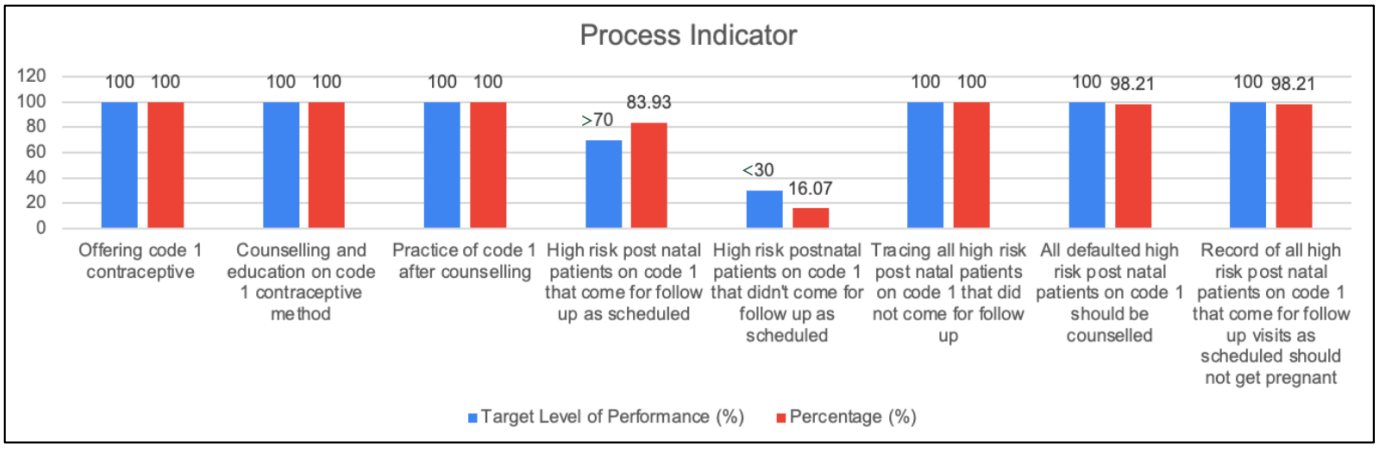

Figure 4 revealed that for process criteria 1-4, 6 out of 8 the process indicators achieved the target level of performance respectively. Notable data such as "high risk postnatal patients on Code 1 who came for follow up as scheduled" and "high-risk postnatal patients on Code 1 who did not come for follow up as scheduled" achieved a better percentage than the target level of performance. The two process indicators that did not achieve the target set were "all defaulted high risk postnatal patients on Code 1 should be counselled" and "record of all high-risk postnatal patients on Code 1 who came for follow up visits as scheduled should not get pregnant", both achieving 55 out of 56 patients (98%), falling short by only 1 patient out of the total audited.

Figure 5: Outcome Indicators

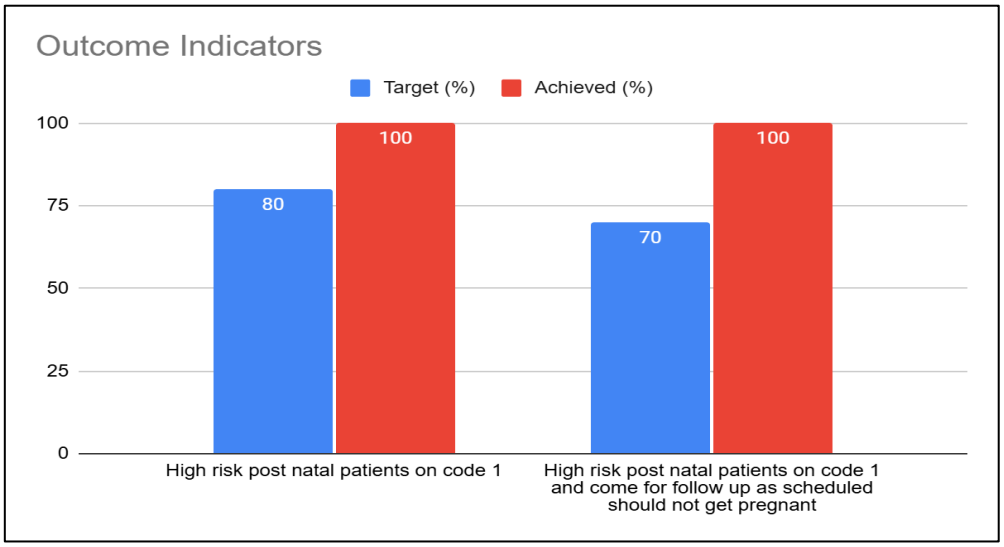

Figure 5 showed the results for outcome indicator. The first indicator, high-risk postnatal patients on Code 1, exceeded the 80% target, achieving 100%. Similarly, high-risk postnatal patients on Code 1 who came for follow up as scheduled and did not get pregnant, exceeded the 80% target, achieving 100%. Both these outcomes were excellent achievements.

DISCUSSION

The sociodemographic characteristics revealed the ethnic distribution of the patients' population at Buntong Health Clinic, whereby majority of high-risk postnatal patients were Indians, followed by Malays, Chinese and others. This ethnic diversity highlights the need for culturally sensitive care and communication strategies. Understanding specific beliefs and needs related to contraception within each group could improve adherence and satisfaction. The age distribution showed that over half fall between the ages of 18 and 30 years. These findings highlight the need for targeted educational and counselling approaches that align with the reproductive health priorities of high-risk younger adults.

The structural indicators showed that both the target and achieved percentages achieved 100%, indicating a strong foundation of infrastructure and resources to support contraceptive services. However, it's important to recognize that structural success is only one component of the broader picture. The real impact of these structures depends on how effectively they are implemented and utilized in practice.

The process outcomes reflect strong compliance with essential steps in the contraceptive care pathway. According to the data, all high-risk patients (100%) received counselling, education, and adopted the Code 1 contraceptive method. This high level of adherence may be attributed to well-structured protocols, effective training of healthcare providers, and strong patient engagement strategies. However, follow-up data highlights areas needing improvement. While 83.9% of high-risk postnatal patients attended their scheduled follow-up visits, 16.1% missed their appointments. Possible reasons for this gap could include logistical challenges such as transportation issues, conflicting responsibilities, or lack of awareness about the importance of follow-up care. On a positive note, all defaulting patients were successfully traced, showcasing a proactive approach to patient management, which may involve robust tracking systems, community health worker involvement, or effective communication strategies.

Additionally, the data revealed that amongst patients who defaulted their follow up, 98.2% of high-risk postnatal patients were retrieved and given counselling, with only one patient falling short. This suggests a need for reinforced education on the importance of continuity in care, for the one patient missed out. Nevertheless, looking into the 98.2% of

patients who attended their follow-up, they managed to prevent subsequent pregnancy, which strongly indicates the effectiveness of the Code 1 contraceptive method. This success may be due to the method's reliability, proper patient education, and consistent support from healthcare providers. These results underscore both the success of the program and opportunities for further enhancement in patient engagement, follow-up processes, and addressing barriers to care.

The outcome results are excellent, with a 100% success rate observed for high-risk postnatal patients using the Code 1 contraceptive method, as well as for those who attended their scheduled follow-ups and prevented pregnancy. Exceeding the set targets indicates that the interventions in place are exceptionally effective in preventing unintended pregnancies within this high-risk group. This success can likely be attributed to factors such as comprehensive patient education, consistent counselling, the reliability of the Code 1 method, and a proactive approach to follow-up care. Additionally, the strong adherence to protocols and the dedication of healthcare providers in ensuring patient compliance may have played a significant role in achieving these outstanding results. These outcomes highlight the effectiveness of the programme while also emphasizing the importance of maintaining these strategies to sustain and build on this success.

RECOMMENDATION

Based on the findings obtained, some recommendations to assist Buntong Health Clinic would include the implementation of information technology in the storage of medical data. As we currently embark on the digitalization world, the medical profession should evolve to adapt with the current technology. It would be easier for the clinic to store data better and the issue of poor handwriting also could be resolved. Buntong Health Clinic is about to embark on using the Clinical Cloud Based Management System (CCMS) as an initiative and directive from Ministry of Health Malaysia, in 2025, hence, this would certainly enable this recommendation of audit to be implemented and practised.

To improve the accuracy of this audit, it would also be better to have an increased sample size with a longer duration of audit, to enable a better representation of various patient groups. These adjustments will lead to clearer and more reliable results for the effectiveness of family planning.

CONCLUSION

The family planning service rendered at Buntong Health Clinic is well-structured and effective, particularly for high-risk postnatal patients. The patient population is diverse, with Indian patients being the majority, followed by Malays, Chinese, and others. This highlights the importance of culturally sensitive care to meet the unique needs of different groups. Additionally, since most patients are between 18 and 30 years old, educational materials and counselling should be tailored to their life stage.

The service is delivered in an efficient and organized manner, with a 100% achievement rate in structural indicators which comes hand in hand with the process outcomes, which showed good compliance, with all high-risk patients receiving counselling, education, and the Code 1 contraceptive method. Although, 16.1% of patients missed follow-up appointments, possibly due to logistical issues or lack of awareness, the proactive follow-up efforts and a 98.2% success rate in preventing pregnancy showed the program's effectiveness. The outcome data is also excellent, with 100% of high-risk patients using the Code 1 method successfully preventing pregnancy. This success reflects comprehensive patient education, reliable contraceptive methods, and strong follow-up care.

Overall, the organized and efficient family planning service in Buntong Health Clinic has effectively reduced unintended pregnancies among high-risk postnatal patients. To maintain and improve these results, efforts should continue to address follow-up barriers, enhance patient education, and ensure care remains culturally and age-appropriate.

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